PTSD
Veterans PALS

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Today's Presentation

- Introduction
- Clinical Phenomenology/Diagnostic Issues
- Epidemiology
  - Comorbidity with other psychiatric conditions
  - Effects of comorbidity
- Treatment Issues
- Models of Care
- Resources

All Service Members Are Impacted by Their Experiences in War

- The experience of war can be rewarding, challenging, and result in greater interpersonal maturation and promote growth
  - Greater sense of self-efficacy
  - Greater resiliency
  - Enhanced identity/sense of purposefulness/belonging
  - Pride
  - Camaraderie
  - Patriotism

Demands and Stress of the War Zone

- The demands, stressors, and conflicts inherent in any combat operation can

  also be:
  - Traumatizing emotionally
  - Spiritually and morally devastating
  - Potentially transformative in damaging ways to the individual, family, community

What Are the Possible Outcomes?

- Acute Stress Disorder
- PTSD/Subthreshold PTSD
- Comorbidity
- Return to Baseline Function
- Posttraumatic Growth/Thriving

Posttraumatic Stress Disorder (PTSD): Overview

- Chronic anxiety disorder with relapses and recurrences
- Untreated PTSD causes significant disability and increases medical utilization substantially
- Comorbidity with mood and anxiety disorders and substance abuse quite common

What Is Fear?

- Fear explains the natural pattern of behavioral responses in anticipation or awareness of danger that prepares the individual to cope with the provocation (Lang et al. 2000).
- Fear typically is elicited by a clearly identifiable stimulus, comes on rapidly, and subsides quickly
- Prepares the individual to body and autonomic responses to address the perceived threat —“fight, flight or freeze”
- Adaptive and necessary for survival….

What Happens During Fear States?

- Immediate: lower blood pressure and reduction in movement to
  orient to threat
  - Eating, digestion, sexual behavior are terminated
- Followed quickly by
  - Increases in plasma epinephrine and norepinephrine
  - Heart rate
  - Blood pressure
  - Respiration
  - Activation of cortical electrical activity
- During fear, there is an increase in the release of neurotransmitters such as norepinephrine, dopamine, and serotonin into the brain and spinal cord that act to sharpen sensory awareness, facilitate motor reflexes, and lessen pain
- Mediated by the amygdala

From Michael Davis, 2007.

What Is Anxiety?

- Apprehension about impending danger, real or imagined producing similar symptoms as fear
- Typically, anxiety is not clearly associated with a single eliciting stimulus, may take a long periods to develop, and may last for long periods of time
- The individual feels at risk without knowing exactly when and how bad the threat might be
- In addition to amygdala, bed nucleus of the stria terminalis also involved

From Michael Davis, 2007.

What Is Anxiety?

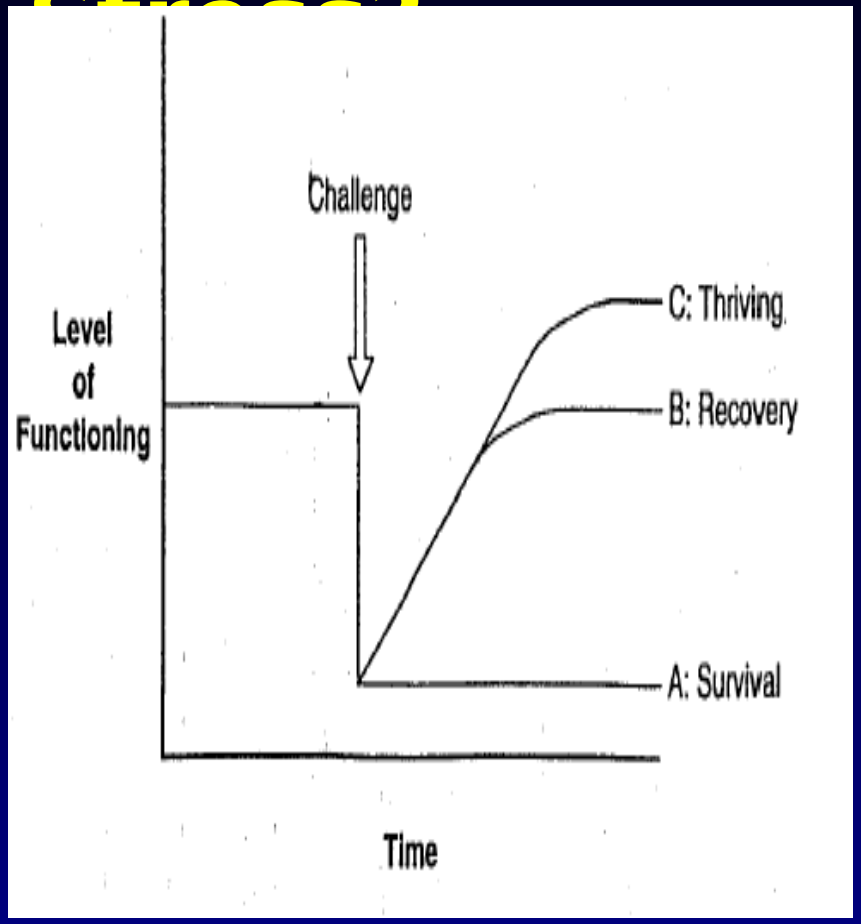
- BNST may be responsible for the long-lasting nature of anxiety
- Because of persistence, individual may feel at constant
  risk or threat
- Neurotransmitter: corticotrophin releasing factor (CRF), from BNST, implicated for long-lasting changes in
  neural activity
- CRF activates pituitary to release cortisol

From Michael Davis, 2007.

Anxiety and Disease States

- Hormone cortisol is involved in changes in energy mobilization. Initially this has the beneficial effect of mobilizing energy to cope with impending danger
- Persistent release of cortisol can have harmful effects, including damage to brain areas involved in memory, such as the hippocampus
- Other reactions caused by anxiety, such as repeated increases in blood pressure may lead to persistent hypertension
- Repeated decreases in digestion and sexual activity may lead to ulcers and loss of libido
- These persistent changes, even without a clear association with an immediate threat, can lead to a sense of despair and hopelessness, given the inability to know how to deal with these negative feelings

How do People Respond/Adapt to Extreme Stress?



- Survival (impaired functioning)
- Recovery (baseline)
- Thriving (grow vigorously, to flourish)

Acute Stress Reactions

- Acute stress reactions are very common after exposure to severe trauma in war; majority of soldiers who initially display distress will naturally adapt and recover normal functioning during following months
  - Numbing of emotional responses
  - Reduced awareness of one's environment
  - Derealization
  - Depersonalization
  - Dissociative amnesia
  - Intrusive thoughts
  - Avoidance behaviors
  - Insomnia
  - Concentration deficits
  - Irritability
  - Autonomic arousal

3 Conditions of PTSD

1. Establishment of Criteria A stressor related to specific intrusive, avoidant, arousal symptoms
2. Emotional reaction is related to the traumatic event (fear response)
3. There is a significant change in global functioning related to the Criteria A stressor

PTSD: Diagnostic Criteria A

- The person has been exposed to a traumatic event in which both of the following were present
  - The person experienced, witnessed, or was confronted with an event or events that involved actual or threatened death or serious injury, or a threat to the integrity of self or others
  - The person's response involved intense fear, helplessness, or horror

PTSD: Diagnostic Criteria A

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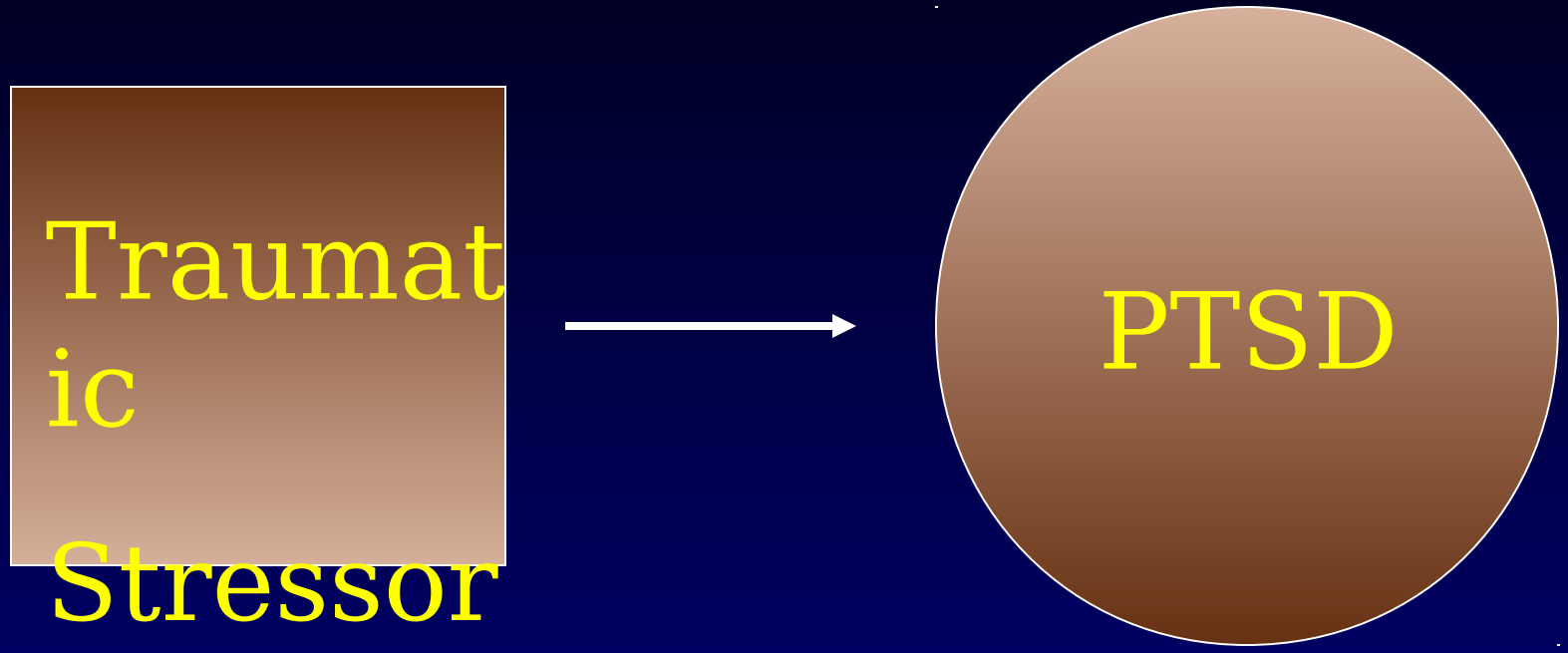
Schematic Views of PTSD



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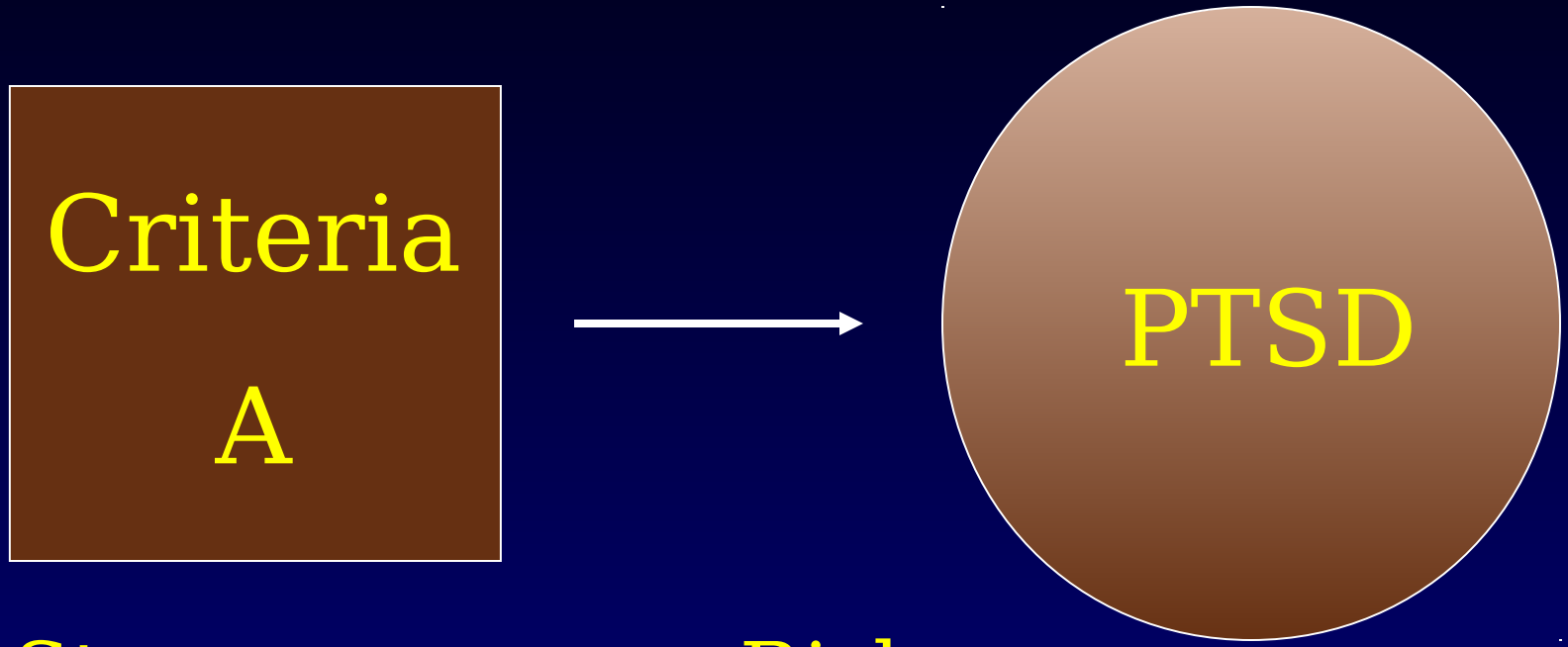


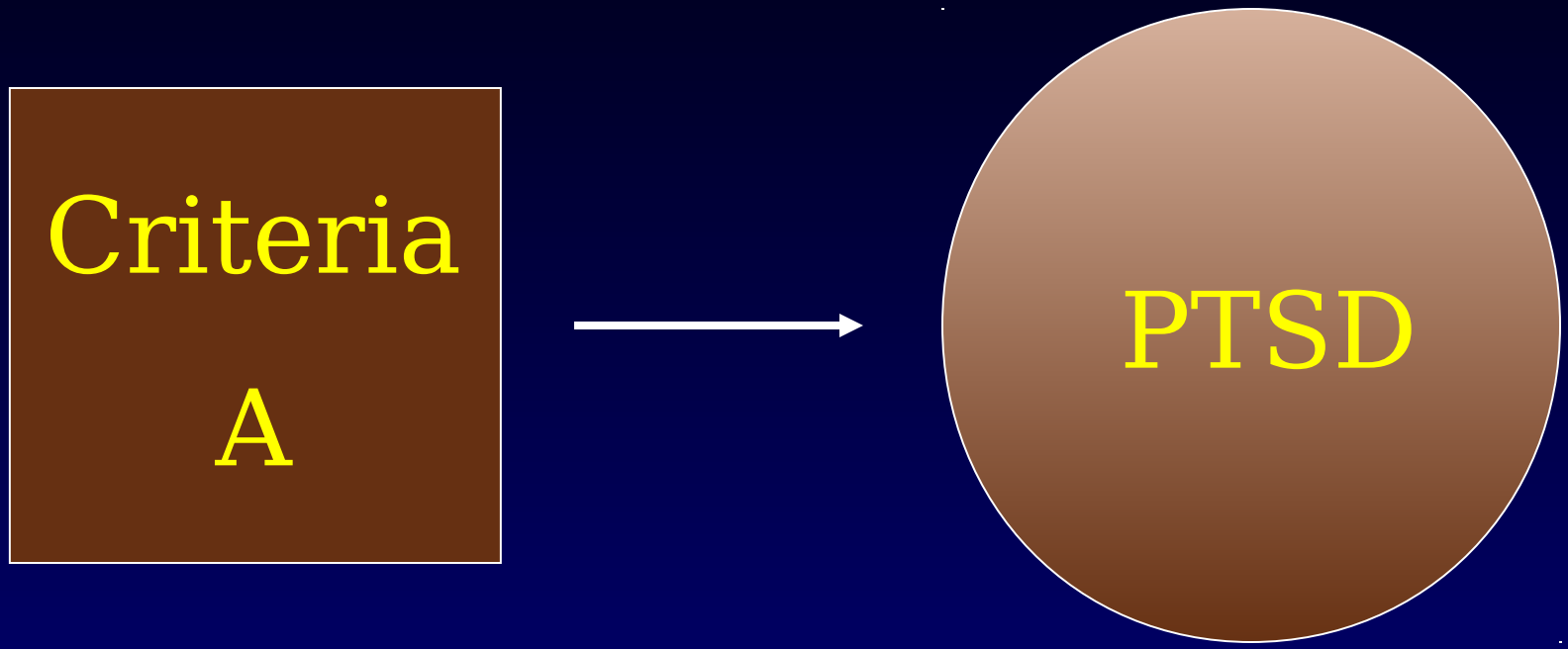
Stressor

Emotional Reaction

Risks

Resilience

Schematic Views of PTSD



Stressor

Emotional Reaction

Risks Factors

Resiliency Factors

PTSD Symptoms

Comorbidity

Quality of Life

Health-Related Disorders

Schematic Views of PTSD

Criteria A

Stressor

Emotional Reaction

Examples

Combat

Criminal Assault

Sexual Assault/Rape

Natural and Technological Disaster

Medical Illness

Physical Abuse

Sudden Death

Schematic Views of PTSD

Criteria

A

Stressor

Emotional Reaction

Examples of Emotional Reactions

Fear

Horror

Disgust

Anger (loss of control)

Sadness/Grief

Emotional Imprint

Schematic Views of PTSD

Criteria

A

Examples of Coping Mechanisms

Peritraumatic dissociation

Numbing of responses

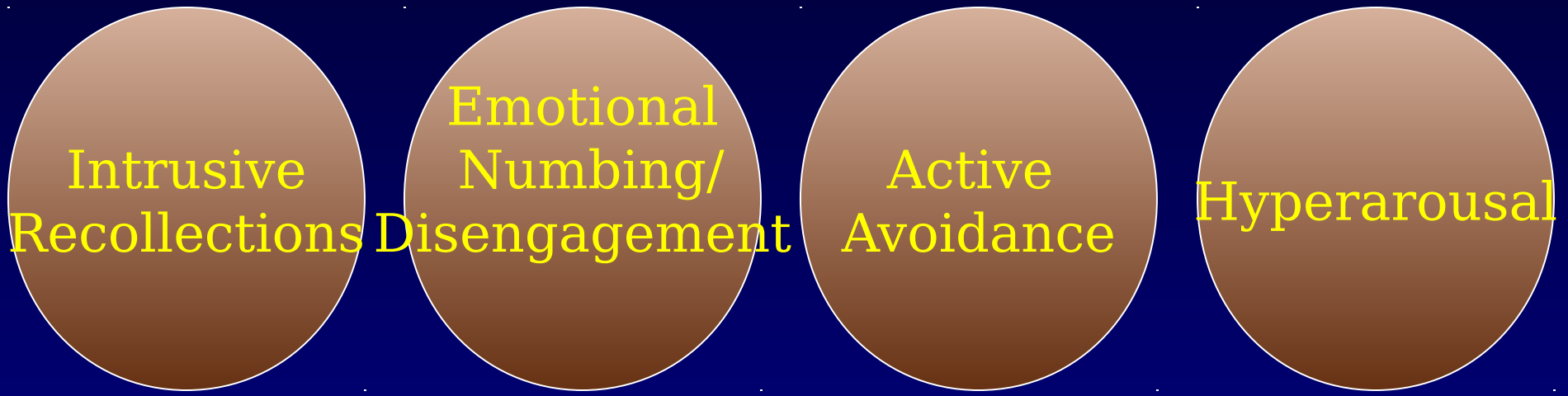
Denial

Stressor

Emotional Reaction

Emotional reaction may or
may not occur at the time of

Schematic Views of PTSD



Secondary and Associated Responses

- Depression
  - From loss of control, as associated response
- Aggression
  - Frustration over reexperiencing, through social learning
- Lowered self-esteem/sense of self
  - Due to impaired cognitive and social skills
- Identity disturbance
  - Amnesia + depersonalization impairs consolidation
- Poor interpersonal relationships
  - Due to aggression, avoidance, poor attachment

Secondary and Associated Responses (cont)

- Guilt and shame
  - Over survival or responsibility for event
- Physical illnesses
  - From chronic overarousal; from injuries at time
    of trauma
- Substance abuse
  - To cope with reexperiencing symptoms; as learned behaviors, effects of opiates may be exaggerated
    with fear and anxiety

Emotional Processing of Fear

Bio-informational Model (Lang): What's contained in the traumatic memory? 1) Stimuli, 2) Reactions, 3) Meaning

Perceptions, belief systems and meaning making are important determinants of trauma responses because:

- They determine which cues will be conditioned stimuli for the trauma
- They mediate the fear response at the time of trauma

Foa and Kozak, 1986.

PTSD: Criteria B Reexperiencing

Criteria B

- The traumatic event is persistently reexperienced
  - Recurrent and intrusive distressing recollections
  - Nightmares
  - Flashbacks
  - Intense psychological and physiological distress at exposure to reminders

Symptoms of PTSD

- Recurrent and intrusive distressing recollections of the event
  - Recurrent, intrusive, and distressing.
  - Spontaneous and uncontrollable, seem to have a life of their own
  - Unwelcomed and unable to be stopped once they start

Symptoms of PTSD

- Examples
  - A veteran driving his car has a sudden and distressing memory of placing mutilated corpses in body bags
  - An earthquake victim who is reading a novel and suddenly has the interfering thought, “If only I had checked the foundation of the house and had it reinforced, I could have prevented the damage and destruction”

Symptoms of PTSD

- Examples that don't meet criteria
  - Ruminative thoughts of "I am worthless," outside the context of the traumatic event
  - Ruminative or obsessive thoughts of "I am sinful," outside the context of the traumatic event
  - Thinking about the event without distressing emotion; one can volitionally think of the events frequently and feel sad without a sense of intrusion to the experience of remembering

Symptoms of PTSD

- Recurrent and distressing dreams or nightmares of the event
  - Dreams must be recurrent and distressing
  - Content should align to some aspect of the traumatic event
  - May consist of actual aspect of the traumatic event or symbolic representation with some form of the trauma-relevant themes
  - Typically nightmares involve some arousal from sleep and related difficulty returning to sleep
  - Sleep avoidance may be attempt to circumvent nightmares

Symptoms of PTSD

- Sudden acting or feeling as if the traumatic event were recurring:
  - Includes pseudo-hallucinations, illusions, dissociative episodes (flashbacks), including those that occur upon awakening or when intoxicated
  - Loss of the ability to distinguish past from present
  - Usually triggered or set off

Symptoms of PTSD

- Intense psychological distress at exposure to cues of the event—“Being Triggered”
  - Psychological distress: fear, anxiety, anger when exposed to representations that symbolize or resemble an aspect of the trauma
  - Example: An assault victim who becomes fearful or anxious when approaching the scene of the assault

Symptoms of PTSD

- Physiological reactivity on exposure to cues of the event
  - Increased arousal expressed as irregular breathing, lightheadedness, tightness in the chest, knot in the stomach, sweating
  - Extremely distressing reactions and physically exhausting
  - Similar to cued panic attack

PTSD: Criteria C
Avoidance

Criteria C

- Persistent avoidance of stimuli associated with trauma and numbing of general responsiveness
  - Efforts to avoid thoughts, feelings, or conversations associated with the trauma
  - Efforts to avoid activities, places, or people that arouse recollections of the trauma
  - Inability to recall an important aspect of the trauma
  - Diminished interest or participation
  - Feelings of detachment or estrangement
  - Restricted range of affect
  - Sense of foreshortened future

Symptoms of PTSD

- Efforts to avoid thoughts, feelings, or conversations associated with the trauma
  - Intentional efforts to avoid thoughts or feelings or deliberate attempts to avoid situations or activities that arouse recollections of the event must have been made, but need not be successful
  - Attempts at avoidance may be obvious or subtle, relatively adaptive or maladaptive

Symptoms of PTSD

- Examples of avoidance
  - Refusal to discuss the traumatic event
  - Use of substances to cloud memories
  - Overworking
  - Refusal to seek help or assistance from medical or mental health may be associated with trauma
  - Isolation

Symptoms of PTSD

- Efforts to avoid activities, places, or people that arouse recollections of the event
  - Evoke significant distress
  - Examples
    - Avoid a memorial service that will include individuals from the past
    - Take a circuitous route to avoid disaster scene

Symptoms of PTSD

- Inability to recall an important aspect of the event
  - Psychogenic amnesia: the person is aware of important aspects of the event that cannot be remembered; there are gaps and holes in the story as it is remembered or told
  - Either partial or complete
  - Distress related to not being able to remember

Symptoms of PTSD

- Inability to recall an important aspect of the event
  - Examples
    - The combat veteran who cannot remember an episode in which a buddy was killed or how he survived
    - Automobile accident victim whose wife was killed and cannot remember being told that his spouse had died

Symptoms of PTSD

- Markedly diminished interest in significant activities
  - Change in level of interest subsequent to the trauma
  - Interest must have been meaningful prior to the trauma (rule out developmental changes)
  - Examples
    - Athletically active woman gives up physical fitness after being scarred in an accident
    - Paramedic who no longer teaches CPR after being unable to revive a clearly moribund victim
  - Must be clearly tied to the trauma, rather than as a consequence of depression

Feelings of Detachment or Estrangement From Others

- Alienation
- Interpersonal problems

Symptoms of PTSD

- Restricted range of affect
  - Restricted range of affect or psychic numbing relates to the range of emotional experiences
  - Unable to have loving feelings, feel any happiness. Complaints that no feelings are possible
  - Example
    - The veteran who attends his father's funeral and is unable to feel any loss, grief, or sadness

Symptoms of PTSD

- Sense of foreshortened future
  - Examples
    - Individual who does not expect to have a job, relationships, children, or long life
    - Hurricane survivor who does nothing to prepare for future emergencies because he “won’t be around anyway”
  - To be distinguished from a chronic lack of regard for future consequences seen in ASPD

PTSD: Criteria D Hyperarousal

Criteria D

- Persistent symptoms of increased arousal
  - Difficulty falling or staying asleep
  - Irritability or outbursts of anger
  - Difficulty concentrating
  - Hypervigilance
  - Exaggerated startle response

Criteria E: Duration of disturbance is more than 1 month

Criteria F: Disturbance causes clinically significant distress or impairment in social, occupational or other important areas of functioning

Symptoms of PTSD

- Difficulty falling or staying asleep
  - Perhaps due to avoidance of nightmares
  - Function of staying hypervigilant
  - Manner of controlling symptoms, stay exhausted

Symptoms of PTSD

- Irritability or outbursts of anger
  - There may be a sense of loss of control, sometimes coupled with fear of even greater expression of anger or hostility
  - Sometimes related to sense of betrayal, fairness, rights
  - Can be triggered by reminders of traumatic event, either actual or symbolic

Symptoms of PTSD

- Difficulty concentrating
  - Secondary to sleep disturbance
  - Intrusive images or thoughts that interfere with cognitive tasks

Symptoms of PTSD

- Hypervigilance
  - Excessive attention to external stimuli beyond that called for given a realistic appraisal of the level of external threat
  - Examples
    - Veteran never sits with back to others in a restaurant
    - Assault victim constantly looking around as they walk down the street
  - Distinguished from paranoid trends or ideation (generalized suspiciousness)

Symptoms of PTSD

- Exaggerated startle response
  - Activation of the central fear response
  - Perhaps greater in the dark
  - Reaction greater than the stimulus

Major Risk Factors for PTSD

- Gender
- Low SES
- Lack of education
- Low intelligence
- Race (minority status)
- Psychiatric history
- Childhood abuse
- Other previous trauma
- Adverse childhood/family
- Family psychiatric history
- Trauma severity
- Lack of social support
- General life stress

Brewin, Andrews, & Valentine, 2000.

What Is Unique About Current Fighting Force?

- Despite wide variation in age, many in fighting force born between 1983-1984
  - Mean age approximately 21 to 22 years
- Born into an age of great technological advances and globalization, including instant access to information via Web, digital imagery, cable television
- Tremendous advances in military weaponry
- Constant conflict in the Middle East, First Gulf War, end of communism, September 11th
- Great wealth and growth in the United States
- Most are determined to succeed, ambitious, well-informed

Generational Effects

- Millenium generation
  - This generation tends to be optimists, confident, positive
  - Tend to be team players, accept authority, rule followers
  - Interested in education, high achievement
  - “They’re the most watched over generation in memory”
  - Looking forward to the future

Source: Howe and Strauss.

Emerging Adults

- 18-24 years of age may be best defined as a unique developmental period, distinct from adolescence or adulthood
- Marked by: identity exploration, instability, self-focused, feeling in-between, possibilities

Source: Jeffrey Arnett, Ph.D.

What Is Resilience?

- Psychological resilience is seen as a relatively stable personality trait characterized by the ability to bounce back from negative, even traumatic, life experiences and by flexible adaptation to the ever-changing demands of life

Building Resiliency

- Resilient people are *optimistic*—they maintain hope about future outcomes and such optimism is associated with the use of active, problem-focused coping when dealing with stressful life events (Carver & Scheier, 1987; Lazarus & Folkman, 1984)
- Resilient people have *self-efficacy*—they believe that they have the skills necessary to effectively manage or accomplish the task at hand (Bandura, 1982), resulting in sustained effort and a greater likelihood of success
- Resilient people have a *sense of mastery*—they believe that they can exert positive control over the environment. Breaking down complex problems into smaller, more accomplishable tasks and goals can result in a series of immediate successes that enhance the individual's feeling of mastery and control over the problem (Meichenbaum, 1985)

Lifetime Prevalence Rates of Trauma and Their Association With PTSD (%)

	Men		Women	
	Event	PTSD	Event	PTSD
Natural Disaster	18.9	3.7	15.2	5.4
Criminal Assault	11.1	1.8	6.9	21.3
Combat	6.4	38.8	0.0	—
Rape	0.7	65.0	9.2	49.5
Any trauma	60.7	8.1	51.2	20.4

Kessler et al 1995.

Prevalence Rates of PTSD: Community Studies

		Total (%)	Females (%)	Males (%)
Kessler (1995)	NCS	7.8	10.4	5.0
Resnick (1993)		12.3	12.3	—
Breslau (1991)	ECA	9.2	11.3	6.0

More Recent Epidemiological Studies

- WRAIR
- Rand Corporation
- Mental Health Assessment Team (MHAT)/DoD

Casualty Comparisons by Conflict

Category	WWII	Korea	Vietnam	Gulf War 1	OEF-OIF*
Total Deployed Service Members	16,112,566	5,720,000	3,403,000	694,550	1,400,000
Battle Deaths	291,557	33,741	47,424	147	4,143
Non-battle deaths	113,842	2,833	10,785	235	806
Non-fatally wounded in action	671,846	103,284	153,303	467	27,122

*From October 7, 2001 to June 2, 2007 (following data from Deyton and Kang, 2008).

Source: http://siadapp.dmdc.osd.mil/personnel/CASUALTY/castop.htm.

Current DoD Roster of Recent War Veterans

- **Evolving roster development by DoD Defense Manpower Data Center (DMDC)**
  - In September 2003, DMDC developed an initial file of "separated" troops who had been deployed to the Iraqi and Afghan theater of operations using proxy files: Active Duty and Reserve Pay files, Combat Zone Tax Exclusion, and Imminent Danger Pay data
  - In September 2004, DMDC revised procedures for creating periodic updates of the roster and now mainly utilizes direct reports from service branches of previously deployed OEF (Operation Enduring Freedom) and OIF (Operation Iraqi Freedom) troops
  - DMDC is actively addressing the limitations of the current roster to improve the accuracy and completeness of future rosters

Treatments for PTSD

Treatments

- Cognitive behavioral therapy (CBT)
- Supportive therapy
- Brief psychodynamic interventions
- Skills building approaches
- EMDR
- Group therapy
- Virtual reality therapy
- Other approaches

What Is CBT?

- Theoretically-derived, empirically validated procedures used to treat problematic behaviors, cognitions, and emotions
- Assumed that problem behaviors/emotions are at least partially learned and can be modified or relearned through adaptive practice

Cognitive Therapy

- *Cognitive Therapy is an* active, directive, time-limited therapy based on the theoretical position that emotion and behavior result from the manner the person structures (perceives) the world (cognitions)
- Mood/anxiety disorders maintained by biased interpretations of life events
- *Cognitive Therapy*:
  - Goals: Help patient identify interpretations/assumptions; interview; self-monitoring
  - Teach strategies that help disconfirm negative interpretations reasoning behavioral testing/empiricism attacking assumptions of self-worth

CBT for PTSD

- Fear/anxiety exposure
- Desensitization to decrease avoidance
- Manage overarousal
- Challenge beliefs
- Sadness/depression
- Cognitive therapy
- Negative inference
- Behavioral activation
- Skills training
- Exposure imaginal or in vivo
- Relaxation training diaphragmatic breathing
- Progressive muscle relaxation
- Cognitive therapy address interpretations about meaning of the event

Dissemination in VA

- VA-DOD practice guideline describes a large range of practices
- Necessary to prioritize in terms of relative importance of dissemination
- Selected as change priorities: evidence-based PTSD interventions
  - Prolonged Exposure Therapy (PE; Foa& Rothbaum, 1998)—Strongly recommended in PG
  - Cognitive-Processing Therapy (CPT; Resick & Schnicke, 1993)

Challenges to Implementation of Evidenced-Based Models of Care

- Provider issues
- System issues
- Clinical issues

Examples of Community Efforts to Address Returning Active Duty and Veteran's Issues

- Combat 2 College
- State Programs
- Military Family and Children Programs

Future Directions

- VA/DoD/VSO collaboration to develop regional clinical educational/clinical programs focused on prevention, evidenced-based clinical treatment, new generation of warriors, outcome monitoring